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## The debate on the economic effects of minimum wage legislation

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**Abstract.** The minimum wage establishment has its origin in the first third of the last century. Since its creation has been a focus of continuing controversy and an unfinished debate on economics field. This work reviews the effects of the minimum wage on employment and other macroeconomic variables, from both theoretical and empirical perspectives. The method is based on the revision of the literature and the main economic indicators. The central contribution of this paper is providing a general reflection on theoretical and empirical analysis about the debate on minimum wage and its effects. The results showed that some labor policies are taking account the effects of austerity strategies, shifting the attention towards the implementation of minimum wages or their updating, in order to reduce the growing inequalities in the distribution of income, and even poverty levels.

**Keywords.** Political Economy; Minimum Wage; Employment; Economic Inequality

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*“Raising the Federal minimum wage, expanding the Earned Income Tax Credit for workers without dependent children, limiting tax breaks for high-income households, preventing colleges from pricing out hardworking students, and ensuring men and women get equal pay for equal work would help to move us in the right direction too”*  
(Barack Obama, 2016: “The way ahead”, The Economist, October, 8th-14th)

### 1. Introduction

In the context of the Great Recession years (2007-2014), there were evident effects on the rising of economic and social inequalities for most developed countries. Those effects made increased the interest in the figure of the “minimum wage” (MW). This interest was either for its implementation in those countries where it did not exist yet, or for its revaluation where it already existed, in order to establish a minimum level of income for the wage-earning population, with derived effects for the value of different social benefits, in many cases.

In this perspective is, for example, the debate unfolded during the final years of President Obama's administration in the United States. Furthermore, in most European Union countries and in other OECD<sup>1</sup> countries here are debates about this issue. That is why around the aforementioned has been reactivating an economic debate, already with a long trajectory in time, which started in the first third of the last century XX, when the minimum wages began to be implemented in some countries (United States, among others) under different minimum wage formulas, in the context of the effects of the Great Depression. It is a long debate, with positions founded both in the field of Economic Science, and in the large and multiply empirical studies, which have tried to determine the effects of this labor institution in the macro and microeconomic field of relationships Economic and labor, for almost a century<sup>2</sup>.

It is possible to find hundreds of examples specified by the Spanish Central Bank, for warning about the negative effects of increasing minimum wages on competitiveness and employment in the Spanish economy. "The implementation a system for annually revising the inter-professional minimum wage would be inappropriate, particularly if it were introduced in the Workers' Statute Law"(Central Bank of Spain, 2005).

Environmental context, in fact, greatly condition the results of the empirical analysis, so that beyond the methodologies applied and the theoretical approaches taken. The presence of enormous disparity of elements, which intervene in its interpretation, condition the effects of the application or expansion of the minimum wage mechanism. The presence or absence of competitive markets for goods and services, the situations of greater or less monopsonic intensity in labor, for example, will determine that those effects induced by the existence or revision of the minimum wage act in one direction or another on the level of employment, prices or, ultimately, the competitiveness of enterprises.

It is also relevant to assess the direction and level of the effects of the minimum wages, taking into account their relative amount, on the average wage levels in force in the economic and labor space analyzed<sup>3</sup>.

Ultimately, a large number of what we mentioned in the previous paragraphs should be understood in relation to the diversity of economic and labor institutions that accompany the presence of the minimum wage and its revaluation. This scenario gives rise to a specific labor framework, which could be more or less rigid. In addition, this scenario will determine possibilities of action and reaction of the economic agents in relation to the Minimum-Wage Institution (MWI). Particularly with the labor market and its characteristics, which will determine

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<sup>1</sup> Precisely, in September 2016 I attended an International Seminar on Minimum Wages, organized by "Action against poverty", with the participation of various political and civic authorities. It was this event that motivated me to develop the work presented here.

<sup>2</sup> "To paraphrase an old joke, if there were only two economists left in the world, they would disagree about the minimum wage. Does it cost jobs or create jobs? It's a valid question, but the answer depends on who you ask. Opponents of minimum wages contend that increased labor costs force businesses to cut staff, costing jobs. That sounds reasonable. Proponents of minimum wages argue that giving workers more disposable income puts money back into the economy, which in turn creates jobs. That makes sense, too. So what's the answer?" Mejeur (2014).

<sup>3</sup> This is a fundamental issue, for example in cases such as Mexico, where the minimum wage level is around 100 euros, a level much lower than the estimated average income in the so-called informal economy. In the event referenced in note 1, we discussed this issue.

the different elasticities for both supply and demand, and which will influence in a singular way the concretion of the effects of legislation on the minimum wage, both in conditions of competitive markets as in monopsony situations, or in other markets with asymmetric information.

In addition, we also should be remember that some particular aspects, as the preeminent theoretical approach in scientific publications (reflecting preferences of journal editors) or, the methodological matters, strongly condition the results of the empirical analysis of the effects of the minimum wage. One example is the remoteness of the spaces in comparison, when the analysis of data of panel of different geographical spaces is used. We could numbered a long list of conditioning factors on the amount and direction of the obtained results.

Finally, we should emphasize the existence of profuse literature (theoretical and empirical) on the effects of minimum wage legislation on employment and its evolution. This is not the same situation for trying to relate this regulatory instrument (MWI) to other economic variables like prices, productivity or labor income inequality, such as on-the-job training, or social, such as schooling or poverty rates, among other considered aspects.

## **2. The minimum wage theory: analyzing different approaches**

Empirical results from the theoretical discourse are sometimes abused, and/or empirical results are extrapolated to confirm positions, which are rather opinions, on the effects of the minimum wage on employment and other economic variables (see figure 1)<sup>4</sup>. However, the debate on the subject is long, deep and, in our opinion, still unfinished.

In the forties of the last century, it began the debate on the effects of an increase of the minimum wage on employment<sup>5</sup>. From that point on, and always with the same and uncontestable assumption that competitive labor markets exist, the apparent consensus in economic science has been that a minimum wage increase affected employment in a negative way<sup>6</sup>. In textbooks, the minimum wage usually appears as the paradigm of an institutional rigidity that causes unemployment by interfering with the invisible hand that empties markets. Many of those who pontificate in this direction has not passed this stage of manual.

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<sup>4</sup> See, for example, how the Spanish Central Bank intrepetes in a biased way this phenomenon, on the quotation above (Spanish Central Bank, 2005).

<sup>5</sup> See for example Lester (1946), Pigou, (1920) and Stigler (1946)

<sup>6</sup> Without being exhaustive, you can see information on this line: Abowd, Kramarz & Margolis, 2000, Baker, Benjamin & Stanger, (1999), Bazen & Skourias (1997), Burkhauser, Couch & Wittenburg (2000), Currie & Fallick (1996), Deere, Murphy & Welch, (1995), Deere, Murphy & Welch, 1996, Kim & Taylor, (1995), Meyer & Wise (1983a), Meyer & Wise, (1983b), Neumark & Wascher, (1992), Neumark & Wascher, (2000), Neumark & Wascher (2003), Orazem & Mattila, (2002).

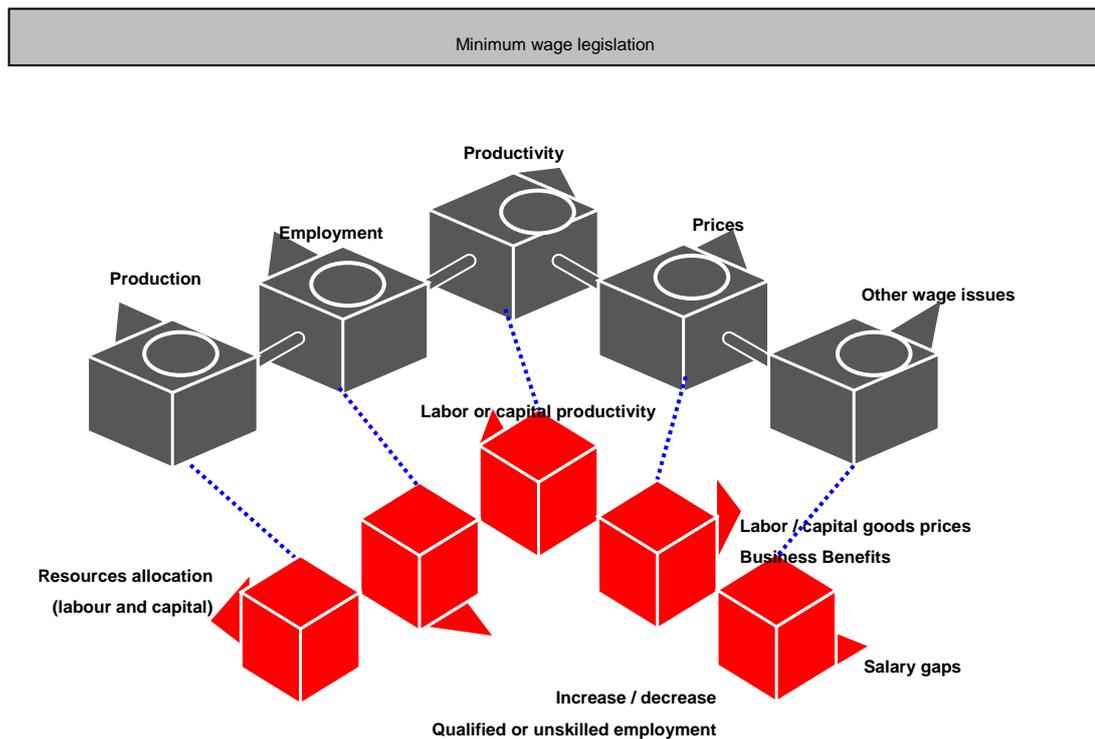


Figure 1: Hypothesis on the economic-labor incidence of minimum wages legislation

## 2.1 The Classical-Neoclassical approach

If we start from the hypothesis of a perfectly competitive labor market, the result is the expected one. Under this approach, it is clear: when the minimum wage exceeds the equilibrium one, which firms hire without limitations, there will be a substitution effect, because of the reaction of entrepreneurs for facing that increase externally induced in the market. This situation will reduce the hired work (falling employment) and will incorporate more capital resources, now cheaper in relative terms<sup>7</sup>.

The main assumption on which the inverse relationship between the minimum wage and employment relies on is completely discredited: the existence of perfect competition in labor markets, even when considered plural. The distribution of the information is not equally among all the participants and the good that is distributed is far from homogeneous, neither by supply nor by demand. Faced with a starting market with low levels of competition, the minimum wage

<sup>7</sup> This perspective is well illustrated in the following statements by Milton Friedman: "The minimum wage law is most properly described as a law saying that employers must discriminate against people who have low skills. That's what the law says. The law says that here's a man who has a skill that would justify a wage of \$5 or \$6 per hour (adjusted for today), but you may not employ him, it's illegal, because if you employ him you must pay him \$9 per hour. So what's the result? To employ him at \$9 per hour is to engage in charity. There's nothing wrong with charity. But most employers are not in the position to engage in that kind of charity. Thus, the consequences of minimum wage laws have been almost wholly bad. We have increased unemployment and increased poverty" (from <http://blog.1worldonline.com/milton-friedman-minimum-wage-myths/>, visited at 2016, 11, 11th).

breaks monopsony demand, improves the circulation of information and the expectations of the actors. Ultimately, raising the *minimum wage improves the overall efficiency of the labor market*. From this perspective, a major branch of economic science, among the three hundred studies that have already been used to test the meaning and size of the relationship, supports the thesis that minimum wage growth has no or negligible effect on the Employment (Brown, 1999 Freeman, 1994 and Freeman 1996).

Summarizing, reality tells us that labor markets move away from this formal model, showing rather situations of limited or imperfect competition. It may be on the supply side, because, for example, workers are not very mobile geographically, which limits one of the basic conditions of a competitive market (absolute mobility of factors). Or it may be on the demand side, by concentrating on the company (in various ways) the power of decision on wage determination.

In this context, especially on monopsony conditions<sup>8</sup>, the effects of the minimum wage are ambiguous, if not contrary to what the theory predicts in the presence of perfect competitive conditions.

In this case, the employer is able to fix wages, below or above the marginal product of labor, so that the appearance of the minimum wage does not have to necessarily lead to a fall in employment. On the contrary, the imposition of a minimum wage can increase employment. The positive effect on employment of the minimum wage can be maximized in the level of the wages corresponding to the equilibrium wage in a competitive labor market. With minimum wage levels above the equilibrium wage (of the competitive labor market) these gains in employment are reversed and employment may fall below its original level. But under monopsony conditions, a greater elasticity of labor supply and / or a lower elasticity of labor demand imply a larger range in which minimum wages can be increased without generating job losses (OECD 1998).

## 2.2 The efficiency wage approach

Another interpretation, link up with a more recent theoretical approach, within the neoclassical current, denominated of "efficiency wages". According to this line of thinking, under conditions of imperfect competition, employers can set their employees' wages above the level of market equilibrium in order to increase worker productivity and reduce absenteeism and job turnover. In this context, a rise in minimum wages may result in an increase in employment. However, as in the case of the monopsony model, beyond a certain level, an increase in the minimum wage could have negative effects on the level of employment. Rebitzer and Taylor (1995) show that, within a model of wage efficiency, an increase in the minimum wage will increase employment in the short term. But, in the long run, however, profits may be lost, depending on the position of firms along the profit curve and on subsequent changes in product prices and the number of firms operating in the market (OECD, 1998).

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<sup>8</sup> See footnote 5

### **2.3 The endogenous development approach and human capital**

Other models admit the possibility of positive effects in the employment of the minimum wage raise take into account the endogenous growth linked to the decisions of investment in human capital. The key is that minimum wages gave incentives for low productivity workers in order to invest more in capacitation or education, which will result in productivity growth. The increase in human capital has a positive impact on growth and, consequently, employment. Cahuc and Michel (1996) show that a decrease in the minimum wage may even reduce growth. Cubitt and Hargreaves-Heap (1999) argue that the net loss of employment resulting from an increase in the minimum wage may be zero for a given range of wage values, since firms' investments in physical capital and human capital By the workers. Acemoglu and Pischke (1998) also show that minimum wages can increase the training provided by the firm to low skilled employees, with positive effects on labor productivity (OECD 1998).

### **2.4 Employment search models**

Minimum wages has also been analyzed using the theoretical framework based on "job search" models. Within this framework, the effects on employment depend on the level of the minimum wage and its impact on the intensity of job search, the level of accepted wages and the probability of the offer of a job. Swinnerton (1996) presents a search equilibrium model in which firms show work demand curves with downward slopes, labor productivity varies from one firm to another, and the unemployed have imperfect information and job search at random and sequentially. The author shows that, because of an increase in average labor productivity, the positive welfare effects can still arise even in those cases where there are negative effects on employment.

### **2.5 Segmented market models<sup>9</sup>**

Minimum wages would only affect some of the segments of the labor market, located on secondary market space. Those in which wages were below that minimum wage. Depending on the size of the segment or segments, the degree of informality of it and the position of its productive supply in the value chain, the impact would be significant on aggregate employment or not, as well as on prices. We could expect some effects on work mobility between some and other segments of the labor market, which do not give the overall volume of labor available and labor employed as a whole<sup>10</sup>, but, in any case, its quality.

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<sup>9</sup> Ruesga et al (2014) show a detailed and illustrated explanation of how the labor market is working, taking account those theoretical approaches

<sup>10</sup>Adding formal and informal sector. In this perspective you can be framed, for example, Monica Jimenez doctoral thesis recently presented at the University of Alcalá de Henares before a committee, which I chaired. In its conclusions it states "it is confirmed that the minimum wage (MW) is presented as a determinant of employment conditions in the medium and large businesses and also in the public sector. In fact, the increasing on MW is linked to an increase in the bad quality work positions and in the informal workplaces, besides to the reduction of the good quality jobs. This implies that the quality of employment in

Then, until cover almost the entire spectrum of theoretical interpretations on the functioning of labor markets and the role of institutions in the same and in the whole of economic system.

After almost a century of theoretical debate, the positions has not substantially changed. Neither the arguments wielded in one or other direction, arguments that we can observe again in the most recent debates about changes in the legislation or amount of the minimum wage. For example, in the United States<sup>11</sup>.

### 3. Empirical analysis of the effects of the minimum wage

To focus on the wide range of empirical analysis carried out on the impact of minimum wage legislation on different functions or aspects of economic activity, the following Chart 1 and 2, have been elaborated, summarizing the arguments in favor and against order to do some kind of action about the minimum wage (creation, increase, etc.). Then the social cohesion and sustainable development is also crucial (Novo-Corti et al, 2015).

**Chart 1.** Reasons in pro of legislating on minimum wage (or increases)

- ✓ *Income bottom, avoiding company abuses. Expanded salary effects on workers, over minimum salaries.*
- ✓ *Improve social cohesion and stable and sustainable economic growth.*
- ✓ *Minimum social benefits threshold. Incomes increase for marginal social groups.*
- ✓ *Replacement unskill by skill labour*
- ✓ *Decrease jobs rotation and searching costs*
- ✓ *Downturn salary gap*
- ✓ *Productivity improvement*
- ✓ *Boosts business efficiency*
- ✓ *I+D+i Improvement*

The most cited arguments, according to Mejeur (2014), in favor of legislation on the minimum wage, specifically its growth, include among others:

- ✓ Places more money in the pocket of low-income workers.<sup>12</sup>
- ✓ It reduces the gap between low and high wages, reducing inequalities, both within companies as in the whole of economy.
- ✓ It introduces more money into the economy; insofar low-income workers are more likely to spend their wages at a greater rate than their better-paid counterparts, who are more likely to save.

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these companies and for the public sector is a key point to the scope and coverage of labor institutions and social security element, as it is in this specific case MW. Therefore, the compliance and adverse effects of MW are evaluated when the labor market, to which it is applied, such as that of large and medium-sized enterprises as well as in the public sector, has different employment conditions and is segmented. Therefore, the non-compliance of the MW is not ultimately due to the successive increases introduced at its level but to the context [segmented markets] in which they occurred" (Jiménez 2016).

<sup>11</sup> Virtually all prominent economists worldwide have advocated some sort of argumentation about the effects of minimum wage in the economy and the labor market. Some of them are on [www.project-syndicate.org](http://www.project-syndicate.org). Moreover, there is a synthesis or the supported arguments in the recent debates in United States of America, in favor to the rise of MW in Komlos (2015) and another against in the text quoted in note 10 ([blog.1worldonline.com](http://blog.1worldonline.com)).

<sup>12</sup> According to a 2013 Congressional Research Service report from the US Congress, a father with two children and who works full time with the current minimum wage should be earning about \$15,000 and living at 76 percent Of the federal poverty line. If the minimum wage rises from the current 7.25 hours to \$9 the same family could be placed at 94 percent of the poverty line.

- ✓ It decrease mobility among low-wage workers, which can have a positive effect on business insofar as higher mobility raises training costs and reduces productivity.

**Chart 2.** Reasons against legislation on minimum wage (or increases).

- ✓ *Jobs losses (in factory and macrolevel).*
- ✓ *Changes of labour relative prices regards to skill levels.*
- ✓ *Some labour intensive and unskill jobs activities way out to informality..*
- ✓ *Competitive companies losses.*
- ✓ *Higher inflation*
- ✓ *Not reduce poverty, but rather increases.*

In turn, the arguments against the growth of minimum wages are (Mejeur, 2014):

- ✓ Reduces employment. Labor costs are the substantial part of the budget of many companies, which means that entrepreneurs will be driven to reduce jobs or hours of work to keep their production floor and profits. This could lead to the disappearance or reduction of incomes for workers with low wages

- ✓ There are better ways to face poverty, such as income tax credits for low incomes, or fiscal policies that encourage the development of financial assets and savings for low income families

- ✓ Increases in labor costs can be passed on to consumers through prices. Higher prices lead to declines in demand may lead to depressive effects on the economy

- ✓ The increase in labor costs leads to lower profits for companies, which means that entrepreneurs have fewer monetary resources to invest in their companies to create jobs and expand their business

As we discussed above, the extent of theoretical interpretation on the neoclassical and derivative slopes, the empirical contributions to this theory are somewhat more modest, in number and in the size of the results<sup>13</sup> even in low-wage sectors. And they are strongly focused on the analysis of the relationship between minimum wage legislation and employment. For example, Machin, Manning and Rahman (2003) find a negative effect on the use of minimum wage introduction in the United Kingdom. But this effect is very modest even considering that a third of the sector analyzed, the domestic service, had previous salaries below the established minimum. This idea of classical manual is, in a way, an anachronism that has been confronted with an abundant economic literature, empirical, with consistent evidence on the zero or even positive effect on employment, in certain circumstances, derivative on the growth of the minimum wage<sup>14</sup>.

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<sup>13</sup> For example, they shown a mean elasticity around  $-0,1$  for the relation por ciento between minimum wages and employment (Brown, Gilroy and Kohen, 1982).

<sup>14</sup> In this perspective, with nuances as to its conclusions, a long list of references can be consulted, among others: Azam, (1992), Bell, (1997), Bernstein & Schmitt (1998), Bhaskar & Ton (1999), Boadway & Cuff (2001), Bruno & Cazes (1997), Card (1992a), Card & Krueger (1994), Card & Krueger (1995), Card, (1992b), Dickens, Machin & Manning, (1999), Hyslop & Stillman, 2004, Islam & Nazara, 2000, Jones, (1987), Katz & Krueger (1992), Klerman (1992), Lemos (2003), Lemos (2004a y b), Machin & Manning (1997), Machin & Manning, (1994), Machin & Manning, (1996), Manning (1995), Shepherd (2000), Stewart (2001) & Wellington (1991). Some of the most outstanding works in this field, developed in the

The sense and amount of the effect of the growth of the minimum wage would not be unidirectional. It varies depending on three variables that, in general, can be annulled until they resolve in zero consequences: the elasticity of the labor demand in the sector covered by the minimum wage, the elasticity of demand in the uncovered sector and the size of the growth of the minimum wage (Fields, 1994). Thus, in the less qualified and less paid jobs, increases in the minimum wage would have a minimal impact on employment. Under this premise, in Spain, where the minimum wage is over the average level of the developed countries (see Table 1 and figure 2), the possibilities of influencing employment would be remarkably low.

**Table 1.** Minimum wage as a proportion of the average wage (in%), 1976, 2000, 2009 and 2015 in OECD countries.

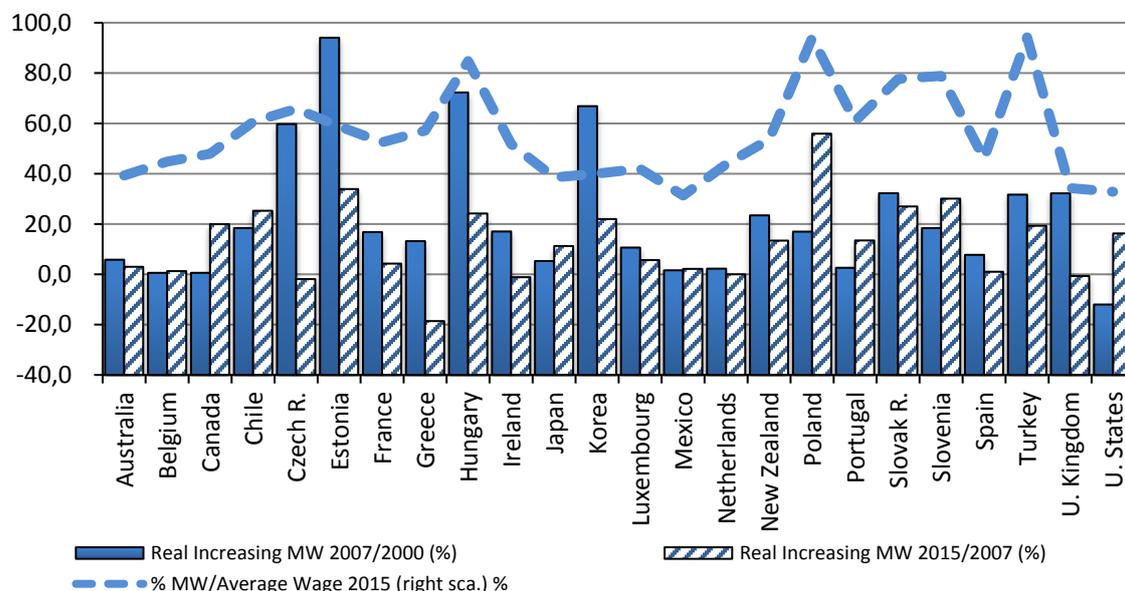
Country	1976	2000	2009	2015
Australia	65	58	54	39
Belgium	58	53	52	45
Canada	52	41	42	48
Chile	..	64	71	61
Czech Republic	..	32	36	66
Estonia	..	34	40	59
France	58	56	62	53
Germany	..	..	..	36
Greece	69	52	49	57
Hungary	..	37	48	85
Ireland	..	68	47	52
Israel	..	..	57	38
Japan	29	32	36	38
Korea	..	29	45	40
Luxembourg	41	54	55	42
Mexico	..	..	37	31
Netherlands	64	51	47	44
New Zealand	57	50	59	54
Poland	..	40	46	94
Portugal	48	49	54	61
Slovak Republic	..	42	45	78
Spain	48	42	42	46
United Kingdom	..	41	46	34
United States	47	36	37	33

**Source:** Own elaboration from Neumark & Wascher (2003) and datos-macro.com

In this regard Joliet (2015) notes that: *“I have collected 138 empirical papers that deal with the minimum wage and its impact on employment. These studies date from 1957 to 2011. They test the effects of minimum wages in more than 21 countries. My survey found that 64% of research in this time period resulted in negative effects on employment, 19% found no effect, 12% found mixed effects, and 5% found positive effects. When the period of time is reduced to 1992-2011, 52% of research found negative effects on employment, 25% found no effect, 16% found mixed effects, and 7% found positive effects. This survey gives us an estimate of whether*

field of empirical analysis, began in the early nineties of the last century in response to the dominant postulates of the neoclassical current, those of Card, Krueger and Katz. In this regard, the blog quoted above (blog.1worldonline.com) states that: *“Now, the Clinton Administration is advancing the novel economic theory that modest increases in the minimum wage will have no impact whatsoever on employment. This proposition is based entirely on the work of three economists: David Card and Alan Krueger of Princeton, and Lawrence Katz of Harvard. Their studies of increases in the minimum wage in California, Texas and New Jersey apparently found no loss of jobs among fast food restaurants that were surveyed before and after the increase”* (See footnote 9, from <http://blog.1worldonline.com/milton-friedman-minimum-wage-myths/>, visited at 2016, 11, 11th)

or not the theory of competitive markets is correct or whether the theory of monopsony is in theory the opposite. What we see is that the vast majority of research supports the theory of competitive markets or the idea that minimum wage is not well structured. Fortunately, workers with a minimum wage constitute a very small portion of the total labor force. Due to this fact, these global negative effects are not so great“ [sic].



**Figure 2.** Minimum wages in OCDE countries. Source: own elaboration from Neumark & Wascher (2003), OECD (2004) and Datos-macro.com

If indeed the growth of the minimum wage has imperceptible effects on employment, the limited growth of labor costs entailed, then, in a general equilibrium model, would have to be paid either by the entrepreneurs, subtracting it from their profit margins (Card & A. Krueger, 1995), or by consumers through the inflation they assume (Aaronson, 1997, MacDonald & Aaronson, 2000. L'Horty & Raults, 2004, Katz & Krueger, 1992 & Lemos, 2004a). However, the very limited literature on these eventualities shows that both effects are very small. Most workers who hover around the minimum wage are in very competitive sectors (in the domestic economy, but not competing with the outside) with little tendency to transfer any wage growth to prices.

If there is no effect on inflation<sup>15</sup> or employment or even on benefits, what the economic literature sees is that raising the minimum wage could lead to a structural transformation of supply to adjust to new labor costs.

In this sense, the sectoral distribution of workers who got earnings equal or above the minimum wage is also important, since it affects their real effects on the competitiveness of the national entrepreneurship network. For example, in accordance with the previous paragraph,

<sup>15</sup> Werner & Sell (2015) stated that “In contrast, we cannot find any significant price reaction for West Germany. This suggests that implemented minimum wage in West Germany is too low in comparison to the predominantly paid wages and is hence not binding”.

Komlos (2015) points out that minimum wage earners do not generally work in the export sector<sup>16</sup>, which would imply that changes in the minimum wage would have little effect on the external competitiveness of workers.

On the contrary, raising minimum wages could stimulate some productivity adjustments through training (public or private) (Acemoglu & Pischke 1999, Arulampalam, Booth & Bryan 2004, Cubitt & Hargreaves-Heap 1999 & Cunningham 1991), or by means of the greater permanence in employment (Fraja, 1996, Nichell & Layard, 1997, Portugal & Cardoso, 2001 & Teulings, 2000) or even by promoting investment in capital goods, in case they were able to catch the effects of (Askenazy, 2001, Gordon, 1995, & Lucas, 1988). Much more important is the first effect, because the majority of minimum wage earners are in branches of services that are not exposed to international competition, as has been said. In the export sector, minimum wages are an anecdote, so the contribution of their rise to international competitiveness is practically nil, this happens practically anywhere in the world, but particularly in the Developed Countries (Standing, Sender & Weeks, 1996).

In this sense, the minimum wage and its growth could be interpreted as a welfare program without side effects, besides contributing to the improvement of the country's productivity. This is due to the absence of incontestable evidence that there is a dragging effect of minimum wages on the rest of the wage pyramid, but rather reduces the dispersion among the different wages (DiNardo, Fortin & Lemieux, 1996, Lee, 1999, Dickens & Manning, 2002 & Smicht, 2015). Reducing wage disparities also contributes to increasing domestic demand<sup>17</sup> by rebalancing the demand-import elasticity that increases with wage dispersion. That these growths in domestic demand do not translate into inflation will not be the responsibility of the recipients of rising minimum wages, but rather of policies on supply in general and market liberalization in particular. Under this scenario we would be facing one of the few examples of virtuous circles in economics, within reasonable limits of growth.

Regarding the indexation of the minimum wage to some kind of reference, be it productivity or inflation, it is interesting the declaration that "*We cannot get any conclusion on which of the effects of the indexation of the minimum wage, if they are any, will differ from the current effects of the minimum wage*" (H.I. Grossman, 1981). The evidence is that in Ireland and the United Kingdom, the last countries to introduce minimum wages, at levels substantially higher than those discussed in Spain, this fact has not translated into negative impacts on employment. Both countries have unemployment rates among the lowest in the European Union.

In observing the differences in the field of empirical studies, however, it would be useful to distinguish between effects on the volume of labor or on unemployment, on two sectors of analysis: employment covered and not covered by the institution of the minimum wage (MWI),

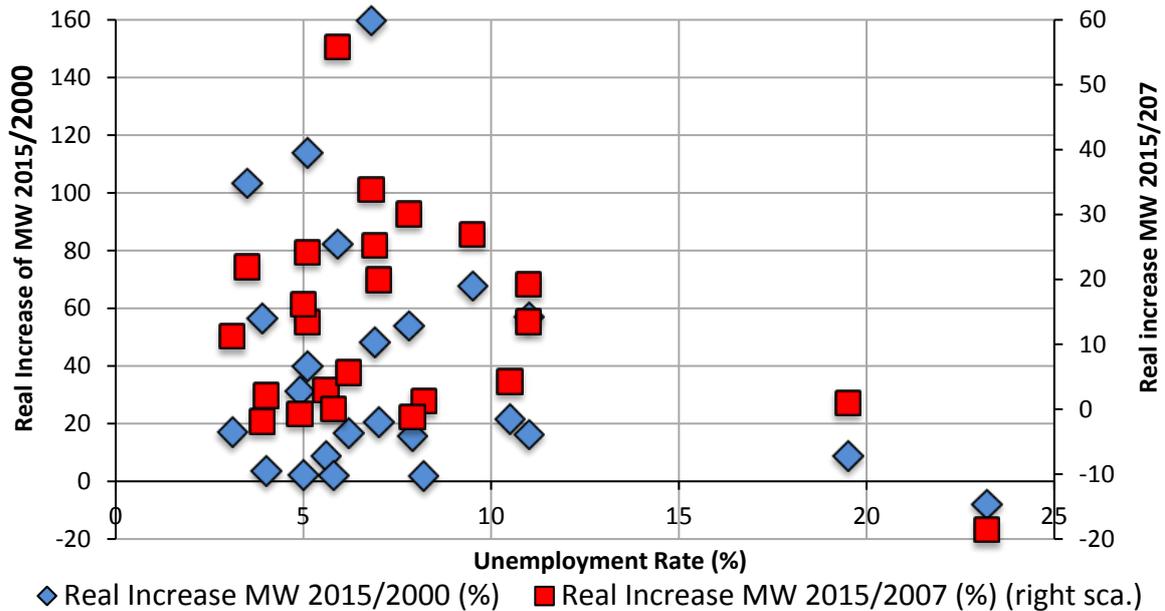
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<sup>16</sup> He concludes: "Do you have a Chinese McDonald's in your neighborhood? I don't think so. In fact, most of the people who work for under \$10 an hour are working as cashiers at grocery and department stores (1.4 million), retail salespeople (1.1 million), cooks (1 million) and janitors, cleaners, waiters or waitresses (1.5 million) — none of whom work in the export sector. Raising their minimum wage would not hurt our exports at all. Their wages have nothing to do with competing with the rest of the world". (Komlos, 2015).

<sup>17</sup> "There is no evidence about the adverse effect of this rent and there is evidence on the positive effect on consumption" (García Vega, 2013).

as Mincer (1976) did<sup>18</sup>. In this regard, it is important to consider the relative importance of the minimum wage (its actual coverage, which in most developed countries is often reduced<sup>19</sup>), to differentiate between the covered and uncovered sectors by the presence or growth of the minimum wage.

In any case, the empirical evidence does not seem to be conclusive due to the effects of modifying the minimum wage nor in any one variable (active population / unemployment) as shown below, in a simple way, in Figures 3 and 4.



**Figure 3.** Real Increase of the Minimum Wage (2015/2000 and 2015/2007) and the Unemployment Rate in OECD countries. Source: Own elaboration based on OECD data.

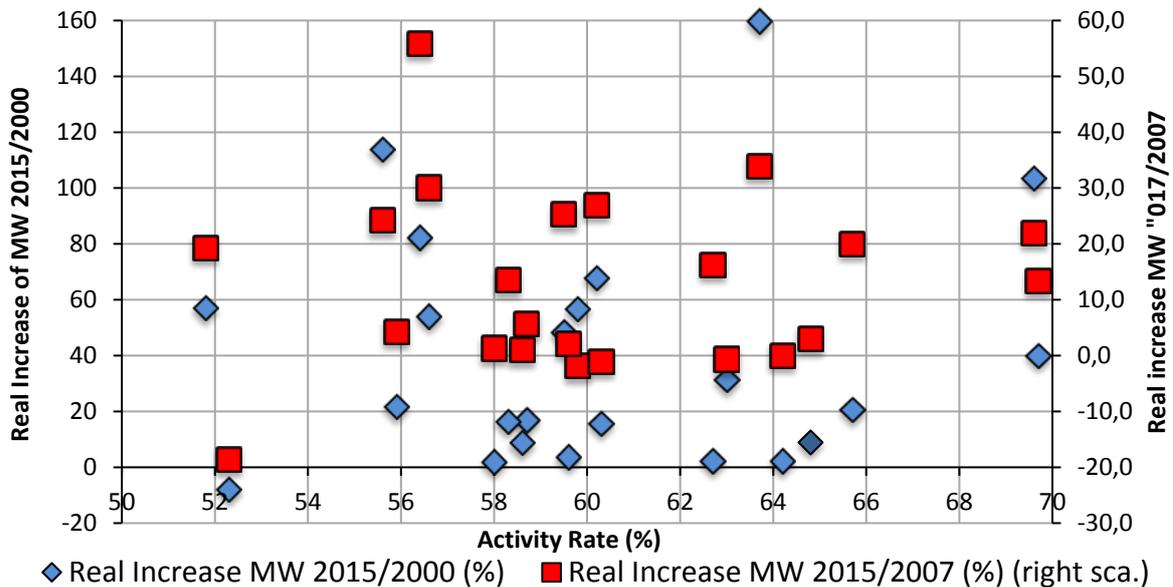
There is no relationship between the growth of the minimum wage (both before and including the analysis of the Great Depression) and the unemployment rate (in 2016). The countries with

<sup>18</sup> What, curiously, could lead us to interpretations close to those that arise from the "theory of segmentation", understanding that the labor market is articulated in different segments, on which the modification in the institution of the minimum wage would impact in a way very different manner (with labor movements included, as noted above, in note 11). Although Mincer is actually referring to another type of situation, of separation between those who have wages above or below the minimum wage, considering those as not covered, those not directly affected by the MWI; However, the different effects on unemployment or activity rates could be explained by the fact that part of the labor displacement effect due to the raising of the minimum wage could be directed linked not to unemployment but to inactivity (part of which, could fall within the scope of the informal employment).

<sup>19</sup> For example, for the United States, based on The Bureau of Labor Statistics, it has been pointed out that in 2012:

- ✓ Around 3.6 million (or 4.8 percent) of the 75 million workers paid on an hourly basis earn \$7.25 an hour or less.
- ✓ More than half of minimum wage workers are under the age of 25.
- ✓ Six percent of women and 3 percent of men earn minimum wages.
- ✓ The leisure and hospitality sector has the highest proportion of minimum wage workers.
- ✓ Louisiana, Oklahoma, Texas and Idaho have the highest percentage of minimum wage workers.
- ✓ Alaska, Oregon, California, Montana and Washington have the lowest percentage of minimum wage workers. (Mejeur, 2014).

the highest unemployment rate in 2016 (Greece and Spain) recorded very low, if not negative, growth of the minimum wage in the two periods considered. However, for the places with lower unemployment rates, there is a great dispersion in minimum wage levels.



**Figure 4.** Real Increase of the Minimum Wage (2015/2000 and 2015/2007) and Activity Rate (%) in OECD countries. Source: Own elaboration in basis to OECD data.

Similarly, the possible relationship of increase in the minimum wage and activity rate (data 2015), analyzed by means of panel data for several OECD countries, can be considered not significant.

#### 4. Concluding remarks

In the current debate on the incidence of the minimum wage on employment or, more broadly, on the functioning of the economic system and the labor market, there is much more of theoretical discourse (with its ideological connotations) than of consistent and unquestionable empirical evidence. This debate has become more pronounced in recent decades, increasing pressures for the increase in the IMS, given the deregulation of European labor markets and subsequent growth in income inequality (functional and salary), in an economic recessive context, boosted by austerity policies<sup>20</sup> implemented in some European countries (Díaz-Roldan, 2017). This has led to understand the minimum wage as a restrainer of inequalities and even reducing poverty levels.

When making empirical estimates, first should be taken into account, on the one hand, the structural and institutional characteristics of labor markets analyzed and, on the other hand, the comparisons or causal relations. In order to appreciate such differences, it is necessary to rely on analytical models that simultaneously contemplate the structural and institutional characteristics of these markets (affecting the elasticities of the variables of the model, the

<sup>20</sup> See García and Ruesga Benito, 2014

supply and demand of labor, the occupational and sectoral structure, the level and characteristics of informality in employment, etc., as well as the disparity of institutions that regulate the operation of markets), the singularities of minimum wage legislation in each area (relative amount, intensity of coverage, etc.) and the actual situation of the labor market (salary level and structure, etc.).

With this background, an abundant literature of empirical analysis has been generated, generally based on inevitably simplifying models, which offer a huge disparity of uneven results.

In general, there is not enough evidence to ratify without any discussion one of the theoretical approaches contemplated. Different reasons are pointed out: “the lack of understanding of the functioning of labor markets, our inability to get rational legislation and the small size of the workers affected by the minimum wage are factors that explain how it is a myth the fact that it is possible to manipulate the labor market to achieve meaningful results” (Joliet, 2015).

And yet a good part of the developed countries and most Europeans have had legislation on minimum wage for decades, plus a few others that have recently been incorporating it, such as Ireland, the United Kingdom and Germany. It could therefore be concluded that the redistributive and, by extension, social stability aspects are more concerned than the possible adverse effects on employment or other relevant variables for the purposes of economic equilibrium and corporate competitiveness (or, alternatively, evidence of other positive effects, such as those on labor productivity).

In general, there is no significant political rejection of increases in MWI, except in strongly ideologized business or political environments (in the neoliberal perspective) because of the hypothetical job losses that would result from it (and derivative effects that would decline welfare). In many cases, the revaluation of minimum wages is indexed to some macro variable (usually the evolution of consumer prices) and its application does not usually generate extreme controversy in the political world. It is therefore appropriate, before establishing a priori conclusions about the effects of the minimum wage on any relevant variable characteristic of the equilibrium or economic growth, to take into account, for a particular space:

- ✓ A diagnosis of the labor market situation: imbalances, informality, wage level, functioning of labor institutions.

- ✓ The institutional landscape of the minimum wage. Existence, scope of application, interaction of different levels (geographical, occupational, etc.) revaluation and management, etc.).

- ✓ The definition of the pursued objectives with the implementation / increase of the amount of minimum wage.

All the above mentioned should be taken account for actuate on the next issues:

Legislating on minimum wage minimizing adverse effects and promoting pro-positive results: definition of objectives (hierarchy), basic parameters of the minimum wage or its increase: scope, social participation, etc.

Continuous monitoring on these possible effects for evaluation:

✓ Microeconomic effects at the enterprise level: job search, productivity, differential wages, etc.

✓ And of the observable effects at the macroeconomic level: on aggregate employment, wage developments, production supply, aggregate demand, price evolution, economic growth, impacts on income distribution and asset concentration, On poverty, etc.

To such effects, and in general, it can be concluded, following Belman and Wolfson (2014: 401), that “*modest increases in the minimum wage raise the wages of the working poor without substantially affecting employment or working hours, and provide. The minimum wage is constituted as a policy instrument which, when used correctly and in combination with other policies and programs, can improve the standard of living Of the working poor*“(Ibídem)<sup>21</sup>

But, of course, theoretical reflection and empirical applied research on the effects of legislation on the minimum wage continues.

## References

- Aaronson, D. (1997). Price pass-through and minimum wages. Federal Reserve Bank of Chicago.
- Abowd, J. M., Kramarz, F. & Margolis, D. N. (2000). Minimum wages and youth employment in France and the United States. In D.G. Blanchflower & R.B. Freeman (Eds.), Youth employment and joblessness in advanced countries. National Bureau of Economic Research.
- Acemoglu, D. & Pischke, J. S. (1999). The structure of wages and investment in general training. *Journal of Political Economy*, 107(3), 539-72. doi: 10.1086/250071
- Arulampalam, W., Booth, A.L., & Bryan, M.L. (2004). Training and the new minimum wage. *Economic Journal*, 114, 87-94. doi: 10.1111/j.0013-0133.2003.00197.x
- Askenazy, P. (2001). Minimum wage, exports and growth. Centre D'etudes Prospectives D'economie Mathematique Appliquees a la Planification, Ecole Normale Supérieure.
- Azam, J. P. (1992). The agricultural minimum wage and wheat production in Morocco (1971-89). *Journal of African Studies*, 1(2), 171-191.
- Baker, M., Benjamin, D., & Stanger, S. (1999). The highs and lows of the minimum wage effect. A time-series cross-section study of Canadian law. *Journal of Labor Economics*, 17(2), 318-50. doi: 10.1086/209923
- Banco de España, (2005). Boletín económico, enero 2005. Banco de España.

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<sup>21</sup> These conclusions are obtained through a meta-analysis of more than 200 academic articles related to the minimum wage published since 1991 (focusing mainly on articles published since 2000), in which they try to clarify existing research And explain the effects of raising the minimum wage on various variables including income, education, employment, inequality and poverty.

Three models exist in the literature in order to analyze the populations affected by the variation in the minimum wage, the temporal sequence and the magnitude of its effects. Although primarily focused on the United States, they also consider research conducted in Canada, the United Kingdom, and several other developed countries to perform micro and macroeconomic analysis.

- Bazen, S., & Skourias, N. (1997). Is there a negative effect of minimum wages in France? *European Economic Review*, 57(3-5), 723-732. doi: 10.1016/S0014-2921(97)00004-4
- Bell, L.A. (1997). The impact of minimum wages in Mexico and Colombia. *Journal of Labor Economics*, 15(3), 103-135. doi: 10.1086/209878
- Belman D., & Wolfson, P. J. (2014). *What Does the Minimum Wage Do?* Kalamazoo, MI: W.E. Upjohn Institute for Employment Research. doi: 10.17848/9780880994583.
- Bernstein, J., & Schmitt, J. (1998). *Making work pay: the impact of the 1996-97 minimum wage increase*, Economic Policy Institute.
- Bhaskar, V., & To, T. (1999). Minimum wages for Ronald McDonald monopsonies: a theory of monopsonistic competition. *Economic Journal*, 109(455), 190-203. doi: 10.1111/1468-0297.00427
- Boadway, R., & Cuff, K. (2001). A minimum wage can be welfare-improving and employment-enhancing. *European Economic Review*, 45(3), 553-76. doi: 10.1016/S0014-2921(00)00066-0
- Brown, C. (1999). Minimum wages, employment, and the distribution of income. In O. Ashenfelter & D. Card (eds.), *Handbook of Labor Economics*, North Holland Press.
- Brown, C., Gilroy C., & Kohen, A. (1982). The effect of the minimum wage on employment and unemployment. *Journal of Economic Literature*, 20(2), 487-528.
- Bruno C., & Cazes, S. (1997). Le chômage des jeunes en France: Un état des lieux. *Revue de l'OFCE*, 62, 75-107.
- Burkhauser, R., V., Couch, K.A., & Wittenburg, D.C. (2000). A reassessment of the new economics of the minimum wage literature with monthly data from the current Population Survey. *Journal of Labor Economics*, 18(4), 653-80. doi: 10.1086/209972
- Cahuc, P., & Michel, P. (1996). Minimum wage: unemployment and growth. *European Economic Review*, 40(7), 1463-1482.
- Card, D. (1992a). Using regional variation in wages to measure the effects of the federal minimum wage. *Industrial and Labor Relations Review*, 46(1), 22-37. doi: 10.2307/2524736
- Card, D. (1992b). Do minimum wages reduce employment? A case study of California, 1987-1989. *Industrial and Labor Relations Review*, 46(1), 38-54. doi: 10.2307/2524737
- Card, D., & Krueger, A.B. (1994). Minimum wages and employment: a case study of the fast-food industry in New Jersey and Pennsylvania. *American Economic Review*, 84(4), 772-93.
- Card, D., & Krueger, A. (1995). *Myth and measurement: the new economics of the minimum wage*, New Jersey: Princeton University Press.
- Cubit, R.P., & Hargreaves-Heap, S. P. (1999). Minimum wage legislation, investment and human capital. *Scottish Journal of Political Economy* 46(2), 135-157. doi: 10.1111/1467-9485.00125
- Cunningham, J. (1991). The impact of minimum wages on youth employment, hours of work, and school attendance: cross-sectional evidence from the 1960 and 1970 Censuses. In S. Rottenberg (ed.). *The economics of legal minimum wages*, American Enterprise Institute.
- Currie, J., & Fallick, B. C. (1996). The minimum wage and the employment of youth. *Journal of*

- Human Resources, 31(2), 404-28. doi: 10.2307/146069
- Deere, D. K., Murphy, M., & Welch, F. (1995). Employment and the 1990-1991 minimum-wage hike. *American Economic Review*, 85(2), 232-37.
- Deere, D. K., Murphy M., & Welch, F. (1996). Examining the evidence on minimum wages and employment. In M. Kosters (ed.), *The effects of the minimum wage on employment*, American Enterprise Institute.
- Díaz-Roldán, C. (2017). Fiscal performance in monetary unions: How much austerity should be allowed?. *Panoeconomicus*, 64(1), 61. doi: 10.2298/PAN140730021D
- Dickens, R., Machin, S., & A. Manning, (1999). The effects of minimum wages on employment: theory and evidence from Britain. *Journal of Labor Economics*, 17(1), 1-22. doi: 10.1086/209911
- Dickens, R., & Manning, A. (2002). Has the national minimum wage reduced UK wage inequality? London School of Economics.
- DiNardo, J., Fortin, N. M., & Lemieux, T. (1996). Labor market institutions and the distribution of wages, 1973-1992: a semiparametric approach. *Econometrica*, 64(5), 1001-1044. doi: 10.2307/2171954
- Fields, G.S. (1994). The unemployment effects of minimum wages. *International Journal of Manpower*, 15(2), 74-81. doi: 10.1108/01437729410059323
- de Fraja, G. (1996). Minimum wage legislation, work conditions and employment. CEPR Discussion Paper, 1524.
- Freeman, R. (1994). Minimum wages: again!. *International Journal of Manpower*, 15(2), 8-25. doi: 10.1108/01437729410059305
- Freeman, R. (1996). The minimum wage as a redistributive tool. *Economic Journal*, 106(436), 639-649. doi: 10.2307/2235571
- García Vega, M. A. (2013, December 28). ¿Destruye empleo el salario mínimo?, *El País*.
- García, N., & Ruesga Benito, S. M. (2014). ¿Qué ha pasado con la economía española? *La Gran Recesión 2.0 (2008 – 2013)*, Editorial Pirámide.
- Gordon, R. J. (1995). Is there a trade off between unemployment and productivity growth?. NBER working paper, 5081.
- Hyslop, D., & Stillman, S. (2004). Youth minimum wage reform and the labour market, New Zealand Treasury Working Paper.
- Islam, I., & Nazara, S. (2000). Minimum wage and the welfare of Indonesian workers. Occasional Discussion Paper Series, 3, International Labour Organization.
- Jiménez, M. (2016). La calidad del empleo y la segmentación laboral en el mercado de trabajo de las medianas y grandes empresas y del sector público de Argentina, (PhD Thesis). Retrieved from Universidad de Alcalá de Henares.
- Joliet, A. (2015). The Myth of Manipulation. *The Economics of Minimum Wage*. Retrieved from <https://es.scribd.com/document/54970861/The-Myth-of-Manipulation-The-Economics-of-Minimum-Wage>
- Jones, S. R. G. (1987). Minimum wage legislation in a dual labor market. *European Economic*

- Review, 31(6), 1229-46. doi: 10.1016/S0014-2921(87)80015-6
- Katz, L., & Krueger, A. (1992). The effect of the minimum wage on the fast-food industry. *Industrial and Labor Relations Review*, 46(1), 6-21. doi: 10.2307/2524735
- Kim, T., & Taylor, L. (1995). The employment effect in retail trade of California's 1988 minimum wage increase. *Journal of Business and Economic Statistics*, 13(2), 175-82. doi: 10.1177/001979390906200305
- Klerman, J. A. (1992). Employment effect of mandated health benefits. In *Health benefits and the workforce*, U.S. Department of Labor, Pension and Benefits Administration, U.S. Government Printing Office.
- Komlos, J. (2015, December 15). Why raising the minimum wage is good economics. PBS. Retrieved from <http://www.pbs.org/newshour/making-sense/why-raising-the-minimum-wage-is-good-economics/>
- L'Horty, Y., & Raults, C. (2004). Inflation, minimum wage and other wages: an econometric study on French macroeconomic data. *Applied Economics*, 36(4), 277-290. doi: 10.1080/00036840410001674213
- Lee, D. S. (1999). Wage inequalities in the U.S. during the 1980s: rising dispersion or falling minimum wage?. *Quarterly Journal of Economics*, 114(3), 941-1023. doi: 10.1162/003355399556197
- Lemos, S. (2003). Political variables as instruments for the minimum wage. University College London. Retrieved from <http://discovery.ucl.ac.uk/2552/>
- Lemos, S. (2004a). Are wage and employment effects robust to alternative minimum wage variables? University of Leicester. Retrieved from [https://www.le.ac.uk/economics/research/RePEc/lec/leecon/dp04-4.pdf?uol\\_r=d307e306](https://www.le.ac.uk/economics/research/RePEc/lec/leecon/dp04-4.pdf?uol_r=d307e306)
- Lemos, S. (2004b). The effect of the minimum wage on prices in Brazil, University of Leicester. Retrieved from [https://www.le.ac.uk/economics/research/RePEc/lec/leecon/dp04-4.pdf?uol\\_r=d307e306](https://www.le.ac.uk/economics/research/RePEc/lec/leecon/dp04-4.pdf?uol_r=d307e306)
- Lester, R. (1946). Shortcomings of Marginal Analysis for Wage-Employment Problems. *American Economic Review*, 36, 62-82.
- Lucas, R. (1988). On the Mechanics of Economic Development. *Journal of Monetary Economics*, 22, 3-42. doi: 10.1016/0304-3932(88)90168-7
- MacDonald, J. M., & Aaronson, D. (2000). How do retail prices react to minimum wage increases? Federal Reserve Bank of Chicago.
- Machin, S., & Manning, A. (1994). The effects of minimum wages on wage dispersion and employment: evidence from the UK Wages Councils. *Industrial and Labor Relations Review*, 47(2), 319-29. doi: 10.1177/001979399404700210
- Machin, S., & Manning, A. (1996). Employment and the introduction of a minimum wage in Britain. *Economic Journal*, 106(436), 667-76. doi: 10.2307/2235574
- Machin, S., & Manning, A. (1997). Minimum wages and economic outcomes in Europe. *European Economic Review*, 41(3-5), 733-42. doi: 10.1016/S0014-2921(97)00032-9
- Machin, S., Manning, A., & Rahman, L. (2003). Where the minimum wage bites hard:

- introduction of minimum wages to a low wage sector. *Journal of The European Economic Association*, 1(1), 154-180. doi: 10.1162/154247603322256792
- Manning, A. (1995). How do we know that real wages are too high?. *Quarterly Journal of Economics*, 110(4), 1111-25. doi: 10.2307/2946650
- Mejeur, J. (2014 March). Maximum divided on minimum wage. *State Legislatures Magazine*, March, p.14-17. Retrieved from: [http://www.ncsl.org/Portals/1/Documents/magazine/articles/2014/SL\\_0314-Workforce.pdf](http://www.ncsl.org/Portals/1/Documents/magazine/articles/2014/SL_0314-Workforce.pdf)
- Meyer, R., & Wise, D. (1983a). The effects of the minimum wage on the employment and earnings of youth. *Journal of Labor Economics*, 1, 66-100.
- Meyer, R. & Wise, D. (1983b). Discontinuous distributions and missing persons: the minimum wage and unemployed youth. *Econometrica*, 51(6), 1677-98. doi: 10.2307/1912112
- Neumark, D., & Wascher, W. (1992). Employment effects of minimum and subminimum wages: panel data on state minimum wage laws. *Industrial and Labor Relations Review*, 46(1), 55-81. doi: 10.2307/2524738
- Neumark, D., & Wascher, W. (2000). Minimum wages and employment: a case study of the fast-food industry in New Jersey and Pennsylvania: comment. *American Economic Review*, 90(5), 1362-96. doi: 10.1257/aer.90.5.1362
- Neumark, D., & Wascher, W. (2003). Minimum wages, labor market institutions, and youth employment: a cross-national analysis. *FEDS Working Paper*, 23, National Bureau of Economic Research.
- Nichell, S., & Layard, R. (1997). The labour market consequences of technical and structural change. *Oxford University Discussion Paper Series*.
- Novo-Corti, I., González-Laxe, F., & Pociovalisteanu, D. M. (2015). The economic analysis of maritime catastrophes in sensitive areas: the assessment and calculation of damages in the environment and population's way of life. *Journal of Cleaner Production*, 107, 267-278. doi: 10.1016/j.jclepro.2015.04.084
- OECD (1998). *Making the Most of the Minimum: Statutory Minimum Wages, Employment, and Poverty*. In *Employment Outlook*, (OECD), Paris: OECD Publications
- OECD (2004). *Benefits and wages: OECD Indicators*. Paris: Organisation for Economic Cooperation and Development.
- Orazem, P.F., & Mattila, J. P. (2002). Minimum wage effects on hours, employment and number of firms: the Iowa case. *Journal of Labor Research*, vol. 23(1), 3-23. doi: 10.1007/s12122-002-1014-6
- Pigou, A.C. (1920). *The economics of welfare* (4th Edition). London: Macmillan.
- Portugal, P. & Cardoso, A. R. (2001). Disentangling the minimum wage puzzle: an analysis of job accessions and separations from a longitudinal matched employer-employee data set. *CEPR Discussion Paper*, 2844.
- Rebitzer, J. & Taylor, L. (1995). The Consequences of Minimum Wage Laws: Some New Theoretical Ideas. *Journal of Public Economics*, 56(2), 245-255. doi: 10.1016/0047-2727(93)01411-3

- Ruesga, S. M. et al. (2014). *Economía del trabajo y política laboral* (2nd Edition). Editorial Pirámide.
- Schmitt, J. (2015). Explaining the Small Employment Effects of the Minimum Wage in the United States. *Industrial Relations*, 54(4), 547-581. doi: 10.1111/irel.12106
- Shepherd, A. R. (2000). Minimum wages and the Card–Krueger paradox. *Southern Economic Journal*, 67(2), 469-78. doi: 10.2307/1061482
- Standing, G., Sender, J., & Weeks, J. (1996). *Restructuring the labour market: the South African challenge* (1st Edition). International Labour Office.
- Stewart, M. (2001). The impact of the introduction of the UK minimum wage on the employment probabilities of low wage workers. *Warwick economic research papers*, 630.
- Stigler, G. J. (1946). The Economics of Minimum Wage Legislation. *American Economic Review*, 36, 358-65.
- Swinerton, K. A. (1996). Minimum Wages in an Equilibrium Search Model with Diminishing Returns to Labor in Production. *Journal of Labor Economics*, 14(2), 340-355. doi: 10.1086/209814
- Teulings, C.N. (2000). Bridging the gap between ‘Joe Sixpack’ and ‘Bill Gates’: on the efficiency of institutions for redistribution. *The Economist*, 148(5), 603-24. doi: 10.1023/A:1004105100439
- Barack Obama (2016, October 8th-14th). *The way ahead*. *The Economist*.
- Vincer, J. (1976). Unemployment effects of minimum wages. *Journal of Political Economy*, vol. 84(4), S87-104.
- Wellington, A. (1991). Effects of the minimum wage on the employment status of youths: an update. *Journal of Human Resources*, 26(1), 27-46. doi: 10.2307/145715
- Werner, T., & Sell, F. L. (2015). Price Effects of the Minimum Wage: A survey Data Analysis for the German Construction Sector. *Labour*, 29(3), 310-326. doi: 10.1111/labr.12058
- Wihbey, J. (2016, July). Minimum wage: Updated research roundup on the effects of increasing pay, *Journalist's Resource*. Retrieved from (<http://journalistsresource.org/studies/economics/inequality/the-effects-of-raising-the-minimum-wage>)